

What is claimed is:

1. A method of processing a biomaterial composite, the method comprising the steps of:

providing a source of pulsed ultraviolet (UV) radiation; and

5 directing the UV radiation at the food product so as to photo-ablate the food product.

2. The method of statement 1, further comprising selecting a combination of parameters associated with the radiation.

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3. The method of statement 2, wherein the parameters include at least one of a group including radiation focus spot size, radiation pulse repetition rate and source power.

15 4. The method of statement 3, wherein said selecting step includes increasing the pulse rate so as to increase processing efficiency.

5. The method of statement 2, further comprising adjusting the parameters to alter a performance characteristic of the method.

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6. The method of statement 5, wherein the performance characteristic is processing speed.

7. The method of statement 1, wherein the UV radiation has a wavelength in a range equal to about 150 nm to 375 nm.

8. The method of statement 7, wherein the UV radiation has a wavelength  
5 equal to about 266 nm.

9. An apparatus for processing a biomaterial composite, the apparatus comprising:  
a laser emitting radiation having a wavelength in the ultraviolet range; and  
10 wherein a combination of parameters associated with the radiation is selected so that said laser photo-ablates the food product.

10. The apparatus of statement 9, wherein the parameters include at least one of a group including radiation focus spot size, radiation pulse repetition rate and source  
15 power.

11. The apparatus of statement 10, wherein the combination is based on a characteristic of the food product.

20 12. The apparatus of statement 10, wherein the combination is based on a profile defined by ablation depth versus laser intensity.

13. The apparatus of statement 10, wherein the combination is adjusted according to a performance characteristic.

14. The apparatus of statement 13, wherein the performance characteristic is cutting depth.

15. The apparatus of statement 9, wherein the UV radiation has a wavelength in a range of about 150 nm to 375 nm.

16. The apparatus of statement 15, wherein the UV radiation has a wavelength equal to about 266 nm.

17. An apparatus for processing a food product, the apparatus comprising:  
a laser emitting radiation having a wavelength in the ultraviolet range,  
wherein the radiation is directed towards the food product so as to photo-ablate the food product.

18. The apparatus of statement 17, wherein the radiation is defined by a combination of parameters.

19. The apparatus of statement 18, wherein the combination includes focus spot size, radiation pulse repetition rate, and laser power.

20. The apparatus of statement 17, wherein the combination corresponds to at least one of a group including a processing performance characteristic and a characteristic of the food product.

5 21. The apparatus of statement 17, wherein the wavelength is about 200 nm.

22. A method of processing a biomaterial composite, the method comprising the steps of:

providing a laser that generates ultraviolet (UV) radiation;  
10 selecting operation parameters associated with the laser, wherein the parameters include radiation focus spot size, radiation pulse repetition rate and source power; and  
directing the UV radiation towards the biomaterial composite so as to photo-ablate the food product.

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